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Near-trace monitor records only.

UNITED STATES DEPARTMENT OF INTERIOR

GEOLOGICAL SURVEY

Description of high-resolution seismic reflection data collected in Albemarle and Croatan Sounds, North Carolina (Cruise NE-82-1)

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U. S. Nuclear Regulatory Commission

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Between April 15-29, 1982, the U. S. Geological Survey in cooperation with the Nuclear Regulatory Commission collected multichannel, high-resolution, seismic-reflection data for 208 km of traverse in Albemarle and Croatan Sounds and the Pasquotank, Alligator, and Chowan Rivers, North Carolina (Fig. 1). This work was conducted from the Research Vessel NEECHO (Cruise NE-82-1) to gain knowledge of the stratigraphy and structural elements of the area. This data release makes available the near-trace monitor records of this survey; common-depth-point records are not yet available.

Seismic data were obtained using a DSF-5 Texas Instruments multichannel system. The seismic source was a 15-in^3 Seismic Systems, Inc. water gun with wave shaper. Returning signals were gathered by a Fairfield Industries 120-m-long, 12-channel, 120-element hydrophone streamer and recorded on magnetic tape. The near-trace monitor record was displayed on an EPC 3200 graphic recorder set to a 1-sec sweep rate. Navigation was by Loran-C and corrected to buoys.

The seismic data are of mixed quality. Records were very good in Croaton Sound, but soft and gassy bottom sediment in the Pasquotank and Alligator Rivers and in Albemarle Sound greatly interfered with signal penetration. Good penetration was only obtained in scattered "windows" of hard bottom in these areas. In the Chowan River, very hard bottom caused sound reverberation that made the records uninterpretable.

Original records can be seen and studied at the U.S. Geological Survey offices, Woods Hole, MA 02543. Microfilm or copies of the records can be purchased only from the National Geophysical Data Center NOAA/EDIS, NGDC, Code E-64, 325 Broadway, Boulder, CO 80303 (303-497-6338).

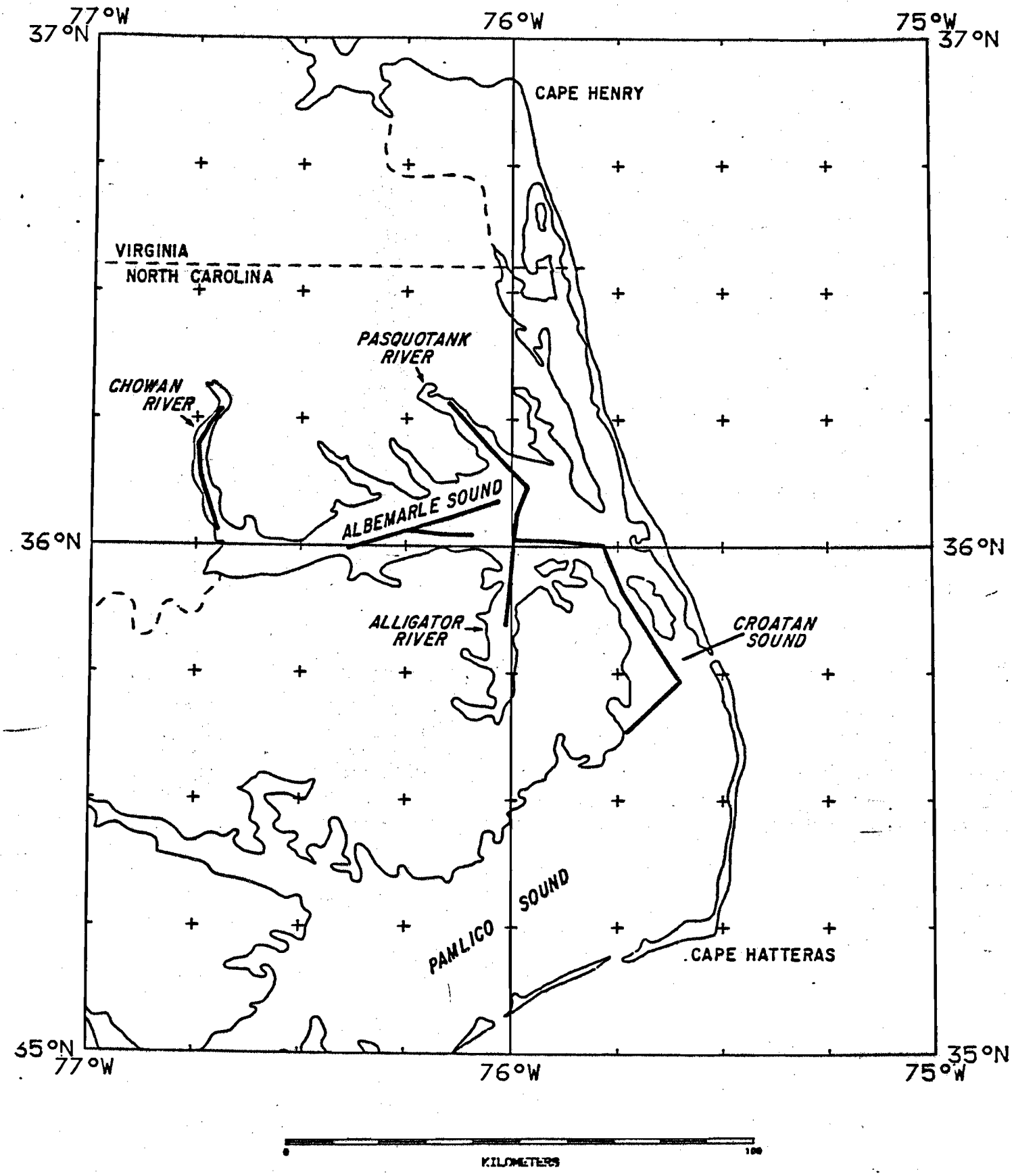

Figure 1: Trackl!nes, NEECHO Cruise NE-82-1, Apr!l 15-29, 1982.